technology review

Car Warns When Your Blood Sugar Is Low

Ford uses wireless technology to connect a car's dashboard to medical devices and health-monitoring apps.

By Emily Singer
October 14, 2011

Your car may soon be able to warn you if your blood sugar dips, alert you to high pollen counts, and remind you to take your medication. Ford demonstrated the new in-car technology—currently a research project—this week at theWireless Health 2011 conference in La Jolla, California.

Many carmakers see a big opportunity in adding new functionality to the computers built into many models. Some cars already use Internet connectivity to alert drivers to traffic tie-ups. Ford has developed three sample apps that combine this connectivity with the growing number of wireless medical devices and health-monitoring apps for people with chronic conditions. Its initial efforts are focused on people with diabetes and asthma; the car can connect to a wireless glucose monitoring device from Medtronic, get allergy alerts through pollen.com, and sync with WellDoc, a mobile health-monitoring platform.

"People already use voice activation for their cell phones and to select music," says K. Venkatesh Prasad, Ford's senior technical leader. "What we are trying to do is extend that platform capability to include health and wellness features."

Health drive: Ford's new platform links a health-tracking app to a car's computer.

The car might seem like an odd place to keep track of your health, but Anand Iyer, chief operating officer of WellDoc, which worked with Ford on the project, points out that it makes a lot of sense. "Americans spend about 230 million hours a week in their vehicles," says Iyer. "It's a unique environment because it's kind of private."

WellDoc has developed programs to help people with diabetes and other chronic diseases track their conditions. The programs provide feedback based on guidelines from the American Diabetes Association and other medical organizations, and keep caregivers up-to-date on the patient's health history.

Iyer, who suffers from type 2 diabetes, says that bringing the platform into the car creates a seamless experience for the patient. For example, a user wakes up, tests his blood sugar and goes to his Welldoc profile on his computer or smart phone. It tells him his blood sugar is low and suggests eating breakfast, which he ignores. When he gets in the car, it reminds him of the low reading and asks whether he had some carbs. "The car acts as another device, nothing more, nothing less, at 70 mph," says Iyer.

For diabetes patients who use Medtronic's wireless glucose monitor, the car could go even further, issuing an alert if blood sugar is trending low. That could be especially useful for a parent driving with a diabetic child in the backseat, says Prasad.

The allergy app combines the car's GPS system with maps of local pollen counts. It might eventually take action based on the data, such as rolling up the windows or changing the air-circulation settings.

Ford has a number of other health-related projects in the works, including seats with built-in electrocardiograph sensors to monitor the heart. While still in the early development stage, the idea is to use the technology to alert drivers who might be having a heart attack or other cardiovascular problem, potentially avoiding accidents.

Healthrageous, another health-monitoring service, is working with Ford to integrate pedometer-type technology that tracks the user's activity level. The pedometer could be integrated into the key fob, which many people carry in their pockets already.

Wouldn't this encourage people to walk instead of drive? "They have an interest in people driving their cars to continue to be healthy and prosperous and driving more Fords in the future," says Healthrageous CEO Rick Lee. "If you develop a relationship with Ford that is about more than the vehicle, where the vehicle becomes a medical device and part of your life, you have greater brand loyalty."